

Title (en)
3-D PRINTER WITH MANIFOLDS FOR GAS EXCHANGE

Title (de)
3D-DRUCKER MIT VERTEILER FÜR GASAUSTAUSCH

Title (fr)
IMPRIMANTE 3D DOTÉE DE COLLECTEURS POUR ÉCHANGE DE GAZ

Publication
EP 3880476 A4 20221207 (EN)

Application
EP 19884309 A 20191113

Priority
• US 201862760305 P 20181113
• US 201916678625 A 20191108
• US 2019061134 W 20191113

Abstract (en)
[origin: US2020147690A1] Aspects are provided relating to additive manufacturing. In one aspect, an apparatus for producing a three-dimensional (3D) structure is described that includes a build chamber having a top portion with windows through which radiative energy from one or more sources is provided to the build chamber to produce the 3D structure, and one or more manifolds disposed within the build chamber. The manifolds are configured to perform a gas exchange within the build chamber, and each manifold is positioned above a region where envelopes of radiative energy from the one or more sources overlap. In another aspect, the manifolds are moved to a first position adjacent to the top portion of the build chamber during a first mode of operation and moved to a second position away from the top portion of the build chamber during a second mode of operation.

IPC 8 full level
B33Y 40/00 (2020.01); **B22F 10/28** (2021.01); **B22F 10/322** (2021.01); **B22F 10/77** (2021.01); **B22F 12/45** (2021.01); **B22F 12/70** (2021.01); **B29C 64/10** (2017.01); **B29C 64/153** (2017.01); **B29C 64/20** (2017.01); **B29C 64/30** (2017.01); **B29C 64/35** (2017.01); **B29C 64/364** (2017.01); **B33Y 10/00** (2015.01); **B33Y 30/00** (2015.01)

CPC (source: CN EP US)
B22F 10/00 (2021.01 - CN); **B22F 10/28** (2021.01 - CN EP US); **B22F 10/322** (2021.01 - CN EP US); **B22F 12/22** (2021.01 - CN EP US); **B22F 12/70** (2021.01 - CN EP US); **B29C 64/153** (2017.08 - EP); **B29C 64/20** (2017.08 - CN); **B29C 64/30** (2017.08 - CN); **B29C 64/35** (2017.08 - EP); **B29C 64/364** (2017.08 - EP); **B33Y 10/00** (2014.12 - EP US); **B33Y 30/00** (2014.12 - CN EP US); **B33Y 40/00** (2014.12 - EP); **B22F 10/77** (2021.01 - CN EP US); **B22F 12/45** (2021.01 - CN EP US); **B22F 12/49** (2021.01 - CN EP US); **Y02P 10/25** (2015.11 - EP)

Citation (search report)
• [X] DE 102015010387 A1 20170209 - FTAS GMBH [DE]
• [X] US 2015174823 A1 20150625 - WIESNER ANDREAS [DE], et al
• [X] US 2017120330 A1 20170504 - SUTCLIFFE CHRISTOPHER [GB], et al
• [A] EP 3378584 A1 20180926 - SLM SOLUTIONS GROUP AG [DE]
• See also references of WO 2020102315A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 2020147690 A1 20200514; CN 111168063 A 20200519; CN 111168063 B 20240426; CN 212042658 U 20201201; EP 3880476 A1 20210922; EP 3880476 A4 20221207; WO 2020102315 A1 20200522

DOCDB simple family (application)
US 201916678625 A 20191108; CN 201911108385 A 20191113; CN 201921956792 U 20191113; EP 19884309 A 20191113; US 2019061134 W 20191113